

## Hypothalamic & Pituitary Hormones, Thyroid & Antithyroid Drugs

001. Hormones are:

- a) Products of endocrine gland secretion**
- b) Mediators of inflammatory process
- c) By-products of tissue metabolism
- d) Product of exocrine gland secretion

002. Select an endocrine drug which is an amino acid derivative:

- a) Insulin
- b) Hydrocortisone
- c) Calcitonin
- d) Thyroxine**

003. Select an endocrine drug which is a peptide derivative:

- a) Oxitocin**
- b) Prednisolone
- c) Nandrolone
- d) Progesterone

004. Select an endocrine drug which is a steroidal derivative:

- a) Gonadorelin
- b) Insulin
- c) Levothyroxine
- d) Hydrocortisone**

005. Hormone analogues are:

- a) Naturally occurring substances but slightly different from hormones
- b) Naturally occurring substances but less efficacious than hormones
- c) Naturally occurring substances having the same structure but different pharmacological properties than hormones
- d) Synthetic compounds, which resemble the naturally occurring hormones**

006. Regarding the mechanism of action of hormones, indicate the FALSE statement:

- a) Hormones interact with the specific receptors in the wall of the cells**
- b) Cyclic AMP acts as a second messenger system
- c) They stimulate adenylcyclase enzyme
- d) Many hormones owe their effect to primary actions on subcellular membrane.

007. Hypothalamic and pituitary hormones (and their synthetic analogs) have pharmacologic applications in three areas,

EXCEPT the following:

- a) As replacement therapy for hormone deficiency states
- b) As drug therapy for a variety of disorders using pharmacologic doses to elicit a hormonal effect that is not present at physiologic blood levels
- c) As a diagnostic tool for performing stimulation tests to diagnose hypo- or hyperfunctional endocrine states
- d) As food supplements**

008. Which of the following hormones is produced by the hypothalamic gland?

- a) Growth hormone-releasing hormone (GHRH)**
- b) Follicle-stimulating hormone (FSH)

- c) Aldosterone
- d) Estradiol

009. Which of the following hormones is produced by the anterior lobe of the pituitary?

- a) Thyrotropin-releasing hormone (TRH)
- b) Corticotropin-releasing hormone (CRH)
- c) Growth hormone (somatotropin, GH)**
- d) Growth hormone-releasing hormone (GHRH)

010. The posterior pituitary does NOT secrete:

- a) Vasopressin
- b) Oxytocin
- c) Growth hormone**
- d) All of the above

011. Which of the following organs is a target for prolactin?

- a) Liver
- b) Adrenal cortex
- c) Thyroid
- d) Mammary gland**

012. Which of the following organ hormones is a target for growth hormone (somatotropine, GH)?

- a) Glucocorticoids
- b) Insulin-like growth factors (IGF, somatomedins)**
- c) Triiodothyronine

d) Testosterone

013. All of the following statements about growth hormone are true, EXCEPT:

- a) It may stimulate the synthesis or release of somatomedins
- b) Low levels of insulin-like growth factor (IGF)-1 are associated with dwarfism
- c) Hypersecretion can result in acromegaly**
- d) It is contraindicated in subjects with closed epiphyses

014. Correct statements about adrenocorticotrophic hormone (ACTH) include all of the following, EXCEPT:

- a) Endogenous ACTH is also called corticotropin
- b) ACTH stimulates the synthesis of corticosteroids
- c) ACTH is most useful clinically as a diagnostic tool in adrenal insufficiency
- d) The oral route is the preferred route of administration**

015. The hypothalamic control exists for the thyroid gland. This consideration is:

- a) True**
- b) False.

016. Indications of bromocriptine are following, EXCEPT:

- a) Prolactin-secreting adenomas
- b) Amenorrhea-Galactorrhea
- c) Prolactin deficiency**
- d) Acromegaly

017. Currently used dopamine agonists decreasing pituitary prolactin secretion are following:

- a) Bromocriptine

b) Cabergoline

c) Pergolide

**d) All of the above**

018. Indications of oxytocin are following:

a) Labor and augment dysfunctional labor for conditions requiring early vaginal delivery

b) Incompleted abortion

c) For control of postpartum uterine hemorrhage

**d) All of the above**

019. Indications of vasopressin are following:

a) Diabetes mellitus

b) Hypertension

**c) Pituitary diabetes insipidus**

d) Incompleted abortion

020. Vasopressin possesses the following:

**a) Antidiuretic property**

b) Vasodilatation property

c) Release of a thyroid hormone into the plasma

d) Diuretic property

021. Oxytocin produces the following effects:

a) It causes contraction of the uterus

b) It assists the progress of spermatozoa into the uterine cavity

c) It brings about milk ejection from the lactating mammary gland

**d) All of the above**

022. Vasopressin causes a pressor effect by:

a) Releasing noradrenaline from the nerve terminals

b) Releasing and activating renin-angiotensin system

**c) A direct action on smooth muscles of the blood vessels**

d) All of the above mechanisms

023. Q1. Which ONE of the following statements is true for Hypothyroidism

**A) It is a syndrome resulting from deficiency of thyroid hormones and is manifested largely by a reversible slowing down of all body functions**

B) It is the clinical syndrome that results when tissues are exposed to high levels of thyroid hormone

C) It is condition which demands destruction of thyroid tissue by Radioiodine ( $I^{131}$ )

D) The treatment of choice is other than replacement therapy

024. Which of the following hormones is produced by the thyroid gland?

**a) Thyroxine**

b) Thyroid-stimulating hormone

c) Thyrotropin-releasing hormone

d) Thyroglobulin.

025. Thyroid stimulating hormone regulates the following:

a) Iodine uptake

b) Biosynthesis of iodothyroglobulin

**c) Release of thyroid hormone into the plasma**

d) All of the above.

026. Thyroid hormones produce various pharmacological effects. Indicate the wrong statement(s).

- a) Decline of the basal metabolic rate in the body**
- b) Increase in the rate and force of contraction of the heart
- c) Increase in the blood cholesterol level
- d) Increase in the heat production

027. Synthesis and release of thyroid hormones are controlled by:

- a) Anterior pituitary alone**
- b) Hypothalamus alone
- c) Blood levels of thyroid hormones alone
- d) All of the above

028. Thyrotrophin stimulates the following processes:

- a) Concentration of iodine by thyroid follicles
- b) Iodination of thyroglobulin
- c) Release of thyroxine and triiodothyronine**
- d) De-iodination of thyroid hormones.

029. The rate of secretion of thyrotropin is controlled by:

- a) The amount of iodine in the thyroid gland
- b) The amount of thyroid hormones in the thyroid gland
- c) The concentration of thyroid hormones in blood**
- d) The concentration of catecholamines in blood

030. Indications of thyroid hormones are following, EXCEPT:

- a) Cretinism
- b) Myxoedema
- c) Hashimoto's disease
- d) For treatment of simple obesity**

031. The common side effect of thyroid hormones is following:

- a) Increases in basal metabolic rate
- b) Angina pectoris
- c) Tremors
- d) Exophthalmos**

032. Currently used antithyroid drugs include the following, EXCEPT:

- a) Propylthiouracil (PTU)
- b) Diatrizoate sodium (Hypaque)
- c) Methimazole (Tapazole)
- d) Potassium perchlorate**

033. In an area where goitre is endemic, which of the following drugs is used?

- a) Iodide 1 part in 100000**
- b) Propylthiouracil 200 mg daily
- c) Methimazole 40 mg daily
- d) Any of the above can be used.

034. Iodide preparations can be used in following situations, EXCEPT:

- a) In thyroid disorders



b) In granulomatous lesions e.g. Syphilis

c) As an antiseptic

**d) In iodism**

035. Daily administration of large doses (several milligrammes) of iodides to a thyrotoxic patient causes:

a) Involution of the thyroid which reaches a maximum in two weeks

b) Increased vascularity of the thyroid gland

c) Decreased storage of the colloid in the thyroid gland

**d) Thyroid gland growing firm and less vascular**

036. Radioiodines ( $I^{131}$  and  $I^{132}$ ) is suitable for:

**a) Elderly patients (over 45 years)**

b) Pregnant women

c) Nursing mothers

d) Younger patients

037. Radioiodines in the body emit:

**a) Mainly  $\beta$  radiations**

b) Mainly  $\gamma$  radiations

c)  $\beta$  and  $\gamma$  radiations equally.

d) Do not emit any radiation, therefore, are safe